> d his

(FILE 'USPAT' ENTERED AT 12:40:41 ON 23 APR 1998)

L1	0	S	707/105/CCLS
L2	109	S	707/103/CCLS
L3	222	S	11-10
L4	109	S	707/103/CCLS
L5	5	S	INDEXING SUBSYSTEM
L6	0	S	L5 AND DOCUMENT MANAGEMENT SYSTEM
L7	0	S	INFORMATION MANAGEMENT SYSTEM (W) INDEXING SUBSYSTEM
L8	0	S	INDEXING SUBSYSTEM (W) FILE MANAGEMENT
L9	223	S	DATABASE TABLES
L10	0	S	L9 AND HIERARCHIE
L11	3	S	METADATA TABLE
L12	10	S	INDEX (P) MANAGED FILES
L13	5	S	ATTRIBUTE STORAGE (P) DATABASE
L14	836	S	RELATIONAL DATABASE
L15	0	S	L14 (P) OBJECT-ORIENTED MANAGER
L16	0	S	RELATIONAL DATABASE (P) SIBLING FILES
L17	0	S	RELATIONAL DATABASE (W) OBJECTS
L18	447	S	RELATIONAL DATABASE AND FILES
L19	31	S	RELATIONAL DATABASE AND FILE STORAGE

> s relational database and file storage range=1995

```
           303 RELATIONAL
          1537 DATABASE
           114 RELATIONAL DATABASE
                 (RELATIONAL(W)DATABASE)
          3638 FILE
         22167 STORAGE
            89 FILE STORAGE
                 (FILE(W)STORAGE)
L25           2 RELATIONAL DATABASE AND FILE STORAGE
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US PAT NO: 5,426,781 [IMAGE AVAILABLE] L25: 1 of 2

SUMMARY:

BSUM(2)

This invention relates to computerized database systems. More particularly, this invention relates to an interactive interface for graphically formulating a **relational database** query and simultaneously formulating a report format to display the results of the query.

SUMMARY:

BSUM(4)

Computer databases that store data electronically are commonly used for retrieving data more efficiently and easily than paper **file storage** methods. Database systems can be used to produce reports organizing the data for output to the user in clear formats. For example, an employee database can contain data on employees such as their respective names, salaries, departments, managers, and employee IDs. This information can be periodically retrieved and organized into reports, such as a report on all employees having salaries in a given salary range. The report could specify, for those employees having a salary in a given range, their names, employee IDs and departments. Similarly, a report can be produced on every employee in a given department, containing their names and employee ID.

SUMMARY:

BSUM(5)

One type of computer software database management system for logically organizing the data stored in the database is a **relational database** management system (RDBMS). In a RDBMS, the data is logically stored in tables having columns corresponding to attributes of the data (such as employee ID, salary, and department number) and rows corresponding to the records of grouped attributes (such as the attributes for a given employee). Query languages such as the structured query language (SQL) are used to query the database and extract particular portions of the data, such as a list of particular attributes of employees having a certain range of salary, as described above.

> s relational database and file storage range=1994

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           254 RELATIONAL
          1254 DATABASE
            75 RELATIONAL DATABASE
                 (RELATIONAL(W)DATABASE)
          3020 FILE
         21497 STORAGE
            57 FILE STORAGE
                 (FILE(W)STORAGE)
L26           5 RELATIONAL DATABASE AND FILE STORAGE
```

=> d 1-5

1. 5,333,183, Jul. 26, 1994, Universal MDR data record collection and reporting system; James H. Herbert, 379/112, 121, 126 [IMAGE AVAILABLE]

2. 5,303,367, Apr. 12, 1994, Computer driven systems and methods for managing data which use two generic data elements and a single ordered file; Richard B. Leenstra, Sr., et al., 707/102; 364/222.81, 282.1, 283.1, DIG.1 [IMAGE AVAILABLE]

3. 5,293,615, Mar. 8, 1994, Point and shoot interface for linking database records to spreadsheets whereby data of a record is automatically reformatted and loaded upon issuance of a recalculation command; Carlos A. Amada, 707/4; 345/418; 364/225, 282.1, 918, 943.1, 974, DIG.1, DIG.2 [IMAGE AVAILABLE]

4. 5,276,867, Jan. 4, 1994, Digital data storage system with improved data migration; Gregory Kenley, et al., 707/204; 364/222.81, 236.2, 236.4, 238, 239, 239.9, 240.8, 242.6, 242.94, 242.95, 243, 243.4, 243.41, 244, 244.6, 246, 246.1, 246.6, 246.8, 248.1, 248.2, 249.4, 254, 254.3, 256.3, 261, 268, 268.2, 268.3, 268.4, 280, 280.9, 282.1, 285, 285.1, DIG.1; 711/112 [IMAGE AVAILABLE]

5. 5,276,860, Jan. 4, 1994, Digital data processor with improved backup storage; Richard W. Fortier, et al., 395/182.04; 364/268, 268.2, 285, 285.1, DIG.1 [IMAGE AVAILABLE]

=> d hit

US PAT NO: 5,333,183 [IMAGE AVAILABLE] L26: 1 of 5

DETDESC:

DETD(70)

The administrator processor software preferably runs under a version of the UNIX operating system available from Sun Micro Systems, SunOS 4.1.1. UNIX is a portable multiuser operating system originally developed by AT&T Bell Labs. A **relational database** 85 is used to store data on the configuration of the message processors and the customers they serve. This database is also used to hold the statistical data retrieved from the message processors. The operating system under which the system runs should permit the use of a **relational database** system which has a number of advantages including a powerful, flexible high level language for producing reports and a user friendly MMI 87. The database program